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CS 340 Final Project

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README

**The Project**:

This project involved being the lead developer for a fictional company, Global Rain. Global Rain is a software company that creates custom software for its clients. This project is for the client Grazioso Salvare. Grazioso Salvare needs a database that will allow them to search multiple animal shelters for dogs for training programs.

**Functionality**:

Data Display: Users can navigate and receive information about animals at the shelters, including their age and breed. This allows Grazioso Salvare to find the right candidates for their training programs.

Dynamic Graphs: This allows for better visualization of different animal breeds and other relevant demographic information about the shelters.

Map: A map displays the location of the animals at the shelters.

**Tools**:

MongoDB: MongoDB is used as the database that stores all the data about the animals in a conveniently accessible way. Python is used as the primary language for developing the user's dashboard. MongoDB is a great resource for efficient data retrieval.

Dash Framework: Dash allows for the rapid development of web applications that use Python. An extension of Dash, JupyterDash, integrates with Jupyter notebooks. Jupyter Notebooks makes it easier to test the interactive environment. Overall, the Dash Framework simplifies the integration of many of the components of the project.

**Completing the Project**:

The first step was to understand the project requirements that were outlined by Grazioso Salvare. The next step was configuring the database with MongoDB to manage the animal shelter data. Next, I developed a “CRUD” module with my animal\_shelter.py. This provides functionality for interacting with MongoDB. I then had to develop a dashboard interface that uses different types of data visualization.

**Challenges**:

Throughout this project, I had difficulty connecting to the server. I believe this is caused by something outside the coursework, perhaps my current network connection settings.